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THE AUGMENTATION OF USUAL CARDIAC REHABILITATION WITH AN ONLINE AND SMARTPHONE-BASED PROGRAM IMPROVES CARDIOVASCULAR RISK FACTORS AND REDUCES REHOSPITALIZATIONS

Oral Contributions
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Background: Cardiovascular disease (CVD) is the leading cause of morbidity/mortality in the US. Despite being an evidence-based recommendation, cardiac rehabilitation (CR) following acute coronary syndrome (ACS) is vastly underused. We have developed an online/smartphone-based application (OSPA) delivering Mayo Clinic's CR, and designed a study to assess the efficacy of such.

Methods: Patients undergoing usual Mayo Clinic CR were recruited to use the application following ACS (n=18) and compared to a similar cohort undergoing standard CR not assigned to OSPA (n=19). OSPA patients performed daily tasks and entered risk factor information (weight, blood pressure (BP), glucose, lipids, physical activity, and diet) at baseline and throughout the program. Changes in risk factors and re-hospitalizations/emergency department (ED) visits were assessed after 90 days.

Results: Compared to the control group, patients in the OSPA group had significant reductions in weight (-4.1+1.1 kg, p=0.01) and BP (-7.9+5.4 mmHg, p=0.05). There was an inverse relationship between OSPA usage and change in BP (r2=0.30, p=0.04), and a positive relationship with diet scores (r2=0.58, p=0.003). The OSPA group showed a significantly lower rate of rehospitalizations/ED visits (-40%, p<0.05, Figure).

Conclusions: This study provides evidence that an OSPA CR program can augment secondary prevention strategies compared to standard CR by improving risk factors for and reducing the healthcare burden of repeat CVD events.